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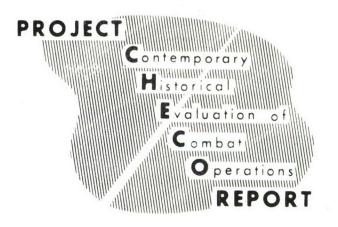
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OPERATION HAWTHORNE

8 SEPTEMBER 1966

HQ PACAF

Directorate, Tactical Evaluation CHECO Division

Prepared by: Mr. Kenneth Sams

S.E. Asia Team

DOPEC-66-03510



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FOREWORD

The following Special Report, Operation HAWTHORNE, describes a significant air-ground operation in the Vietnam conflict. The results of this action demonstrate the effectiveness of tactical air power in providing immediate air sorties on an unplanned basis when an emergency arises. The report also provides a significant evaluation of the effectiveness of a B-52 mission as reflected in interviews, official correspondence, and reports.



OPERATION HAWTHORNE

Operation HAWTHORNE was conducted in Kontum Province, RVN (Republic of Vietnam), between 2-21 June 1966 by three battalions of the 101st Airborne Division, a battalion of the 1st Air Cav Div, a battalion of the 42d ARVN (Army of the Republic of Vietnam) Regiment and two CIDG (Civilian Irregular Defense Corps) companies. The initial objective of the operation was the relief of elements of the 42d ARVN Regiment at Toumorong where intelligence indicated at least an enemy regiment. Before the operation ended, major contact was established with this Viet Cong regiment and tactical air played a key role in handing the enemy a major defeat. In Operation HAWTHORNE there were 250 immediate air sorties flown, compared to only 185 preplanned, a reversal of the usual pattern and an indication of the flexibility of tactical air as organized in RVN under the Tactical Air Control System. major contact was made on 7 June 1966, air strikes were being delivered in less than 30 minutes. There was so much continuous air power available during the period of contact that some aircraft had to be turned back.

When the operation ended, the enemy had lost 479 killed by body count, an additional 506 probably killed in action, plus 209 killed by air (52 counted). Twenty-one Viet Cong cadre, 88 weapons, and 24 crew-served weapons were captured. U.S. losses were 48 killed, 239 wounded, while ARVN losses were ten killed and 29 wounded. The operation was supported by 445 tactical air sorties which dropped





338.3 tons of ordnance and 39 B-52 sorties which dropped 702 tons of bombs.

Significantly, nearly 70 percent of all the tactical air sorties were flown in the seven-day period between 7 June and 13 June 1966, when air was really needed, while the remaining 30 percent flew during the 13-daylight contact period preceding and following the phase of major contact. The B-52 strike made on 13 June 1966 came at a critical 1/time and was credited with "crumbling" the enemy resistance. Also, in Operation HAWTHORNE, around-the-clock air strikes were conducted at night and in poor weather through the use of "Sky Spot" radar bombing system. Ground commanders were highly appreciative of the outstanding air support received during HAWTHORNE, particularly Captain Bill Carpenter, Commander "C" Company, 1/502, who, on 9 June 1966, requested and received an air strike on his enemy-overrrun 2/position.

There were several important lessons learned in HAWTHORNE.

Coordination of air and artillery strikes in certain instances

permitted a lull in artillery support prior to and after close

air support missions. The problem has been identified as one of

communications requiring closer liaison between the FAC and the

artillery liaison officer, utilizing appropriate communications

equipment. HAWTHORNE reemphasized the importance of having an

airborne FAC to coordinate and place air strikes on appropriate

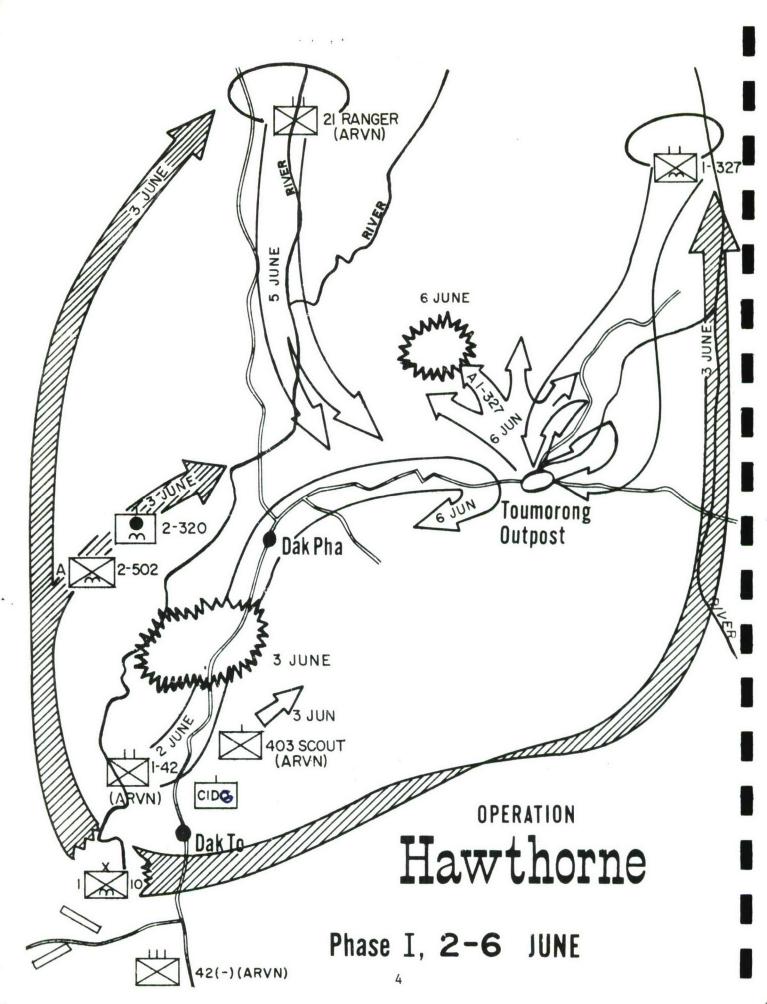
targets. Perhaps the greatest lesson learned in HAWTHORNE was the



effectiveness of the B-52 in a direct support role when used against targets that have been identified by accurate intelligence and when the area is immediately exploited by ground forces after the strike. The B-52 strike of 13 June 1966 was credited with breaking the hard core of the enemy resistance.

During the first five days of HAWTHORNE (2-6 June 1966), only 34 strike sorties were employed as the operation proceeded smoothly according to plan. An F-4C was downed on 2 June 1966 the first day of the operation, while flying close support for HAWTHORNE. On 3 June 1966, a battalion of the 42d ARVN Regiment moved along the road from Dak To to Toumorong outpost, while the 1/327 Regiment moved to a blocking position east and north of the outpost. Only light contact was experienced and, on 6 June 1966, the outpost was relieved and withdrawn. This terminated Phase I of the operation. All friendly forces departed the area except the 1/327 and an artillery battery and rifle company of the 1st Brigade, 101st Div, who remained at Toumorong and in Dak Ta Kan River valley, four kilometers to the west.

On the evening of 6 June 1966, the 1/327 made light contact north of Toumorong, the opening phase of a period of major contact which was to pit an enemy regiment against U. S. forces in a "stand and fight" five-day battle. At 0215 hours, on the 7th, "A" Company of the 2/502 and B Battery of the 2/320 Artillery were attacked by an estimated NVA (North Vietnamese Army) battalion in the vicinity of ZB 0935. Two more assaults were made at 0230 and 0400 hours with contact lasting until 0900 the



morning of the 7th. In one enemy assault during the night, a 105mm howitzer fell into communist hands, but counterattack managed to regain lost ground. Artillery was directed against enemy positions on the hillside overlooking the U.S. force, but heavy enemy small arms fire continued to pour on the Americans after the third attack was repulsed.

At first light on 7 June 1966, the USAF FAC with the 1/327, Captain Burton T. Miller, Jr. put in two napalm strikes on the enemy hill positions. Helicopters and artillery also worked over the enemy positions and contact was broken at 0900, allowing friendly forces to reorganize.

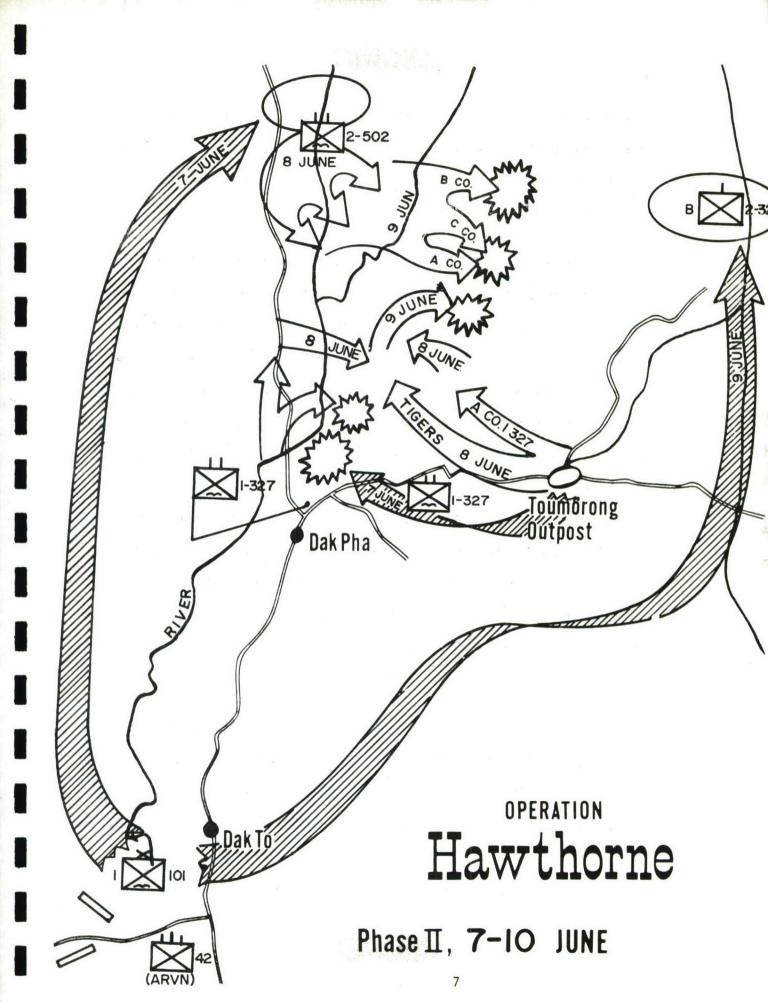
At 0730 on the 7th, the 2/502 was committed from reserve and conducted a helicopter assault to a landing zone in the vicinity of ZB 0844, moving southward on a multiaxis. "A" Company of the 2/502 engaged an estimated NVA Company at 1303 hours in the vicinity of ZB 115287 and stayed in contact until 1945 hours with what had developed into an enemy battalion. A total of twelve immediate air strikes were flown on the 7th by A-1E's and F-100's, dropping 11 tons of bombs. The strikes forced the enemy to break contact and allowed friendly forces to reorganize. No preplanned strikes were flown. Three air strikes flown in support of "A" Company of the 1/327 broke the enemy's assault and allowed the Company Commander, Captain 4/
Ben Willis, to join up two of his three platoons.



In the fighting on the 7th, the 101st reported 77 enemy killed and as contact continued into the next day, the count rose to 197.

Moderate to light contact was made with the enemy until 1830 on 8 June 1966, when the communists broke off. The 1/327 attacked north starting at 0700 in the vicinity of ZB 123388 with 22 tactical air sorties flown in support. Tactical air also supported the 2/502 which was moving south from the vicinity of ZB 095340. The enemy, believed to be elements of the 24th NVA Regiment, lost 31 killed on 8 June and U.S. troops continued to pursue elements withdrawing to to the north. A total of 34 TAC air sorties were flown on the 8th, dropping 24.9 tons of bombs. Twenty-one of these sorties were in close air support, the remainder being direct air support.

During the action on 8 June 1966, the problem of coordination of air and artillery arose when the recon platoon from the 327th was hit hard while climbing a ridge on the river valley. For some reason, the TAC air response to the immediate request was delayed, and by the time air arrived artillery had already zeroed-in within 100 meters of the friendly positions. It was decided by the FAC and ground commander not to break off artillery to allow air strikes since the artillery would not be as effective if brought in later. Therefore, air strikes were made on the perimeter of the attacked unit, while artillery provided more close-in support. One company, moving for support, was within 75 meters of the recon platoon when it, too, was hit by the enemy located between the two units, making





air support impossible. At this time, around 1800 hours, the weather turned bad with clouds and thundershowers and there was some trouble getting a flareship and an AC-47 over the target area due to difficulty in maneuvering in the obscured valley.

On 9 June 1966, elements of the 101st were in pursuit when the enemy turned on the U.S. attackers in a bitter "hand-to-hand," "stand-and-fight" battle which produced the major contact of the operation, one in which TAC air played a key role. The action took place in a bamboo thicket about 15 miles north of Dak To. The 1/327 had made light contact near ZB 1138 in the morning, but the main enemy attack came in the closing daylight hours. At 1600 hours, "C" Company of the 2/502, commanded by Captain Bill Carpenter, engaged an estimated NVA battalion at ZB 128398. "B" Company of the 2/502, moving to assist "C" Company, engaged another NVA battalion at 1710 hours near ZB 144422. "A" Company of the 2/502 linked with "C" Company at 2135 hours and "A" Company of the 1/327, attached to the 502d, moved to "C" Company's assistance, engaging an estimated reinforced NVA company at 2150 near ZB 125395.

The USAF FAC with the 1/327, Captain Burton Miller, first heard of "C" Company's situation when he visited Brigade Headquarters at Dak To around 1500 hours. Told that Carpenter was in solid contact, Miller got airborne and radioed Carpenter, who told him he was in a valley bowl with enemy troops on three sides of him with only one egress, a narrow gully where he had entered the valley. Miller called

for the first flight, which took 15 minutes to arrive. By the time the flight of two F-4C aircraft arrived, the ground situation had become critical. After the first pass by the F-4C's, about 100 meters away, Carpenter radioed that he was being overrun. "Lay it right on top of us", he called. "They are overrunning us, We might as well take some of them too." Captain Miller later said that he realized Carpenter was in a difficult position because he was very excited and apparently nervous. Miller explained the mission to the F-4C pilots. He indicated the smoke which Carpenter had used to mark his position and told the fighters to hit at that point. The lead F-4C came in from the northeast, dropping his napalm about 40 meters short of the smoke but inside the company's perimeter. The second man dropped about 50 meters long, bracketing Carpenter's position but falling right on the edge of Carpenter's perimeter. Carpenter radioed, "That's good, okay, back it out" and it appeared that the napalm had stopped the enemy attack. Captain Miller felt that the drops on the edge of the perimeter did as much good as those inside. There were seven friendly casualties from the short round.

By this time the air was filled with F-4C's and flights were stacked three and four deep. There were nine flights in all, led in by Miller who said: "F-4's were calling other F-4's, that they knew were in the air, to contact Peacock (radio control in II Corps) and get permission to strike." "I was getting airplanes from everyplace," Miller said, "We got some birds back from TIGER HOUND, Marine



birds, Navy birds, and some from Pleiku." A Navy flight with 2000 pound bombs aboard expended on the hills above Carpenter, about 500 meters away.

Around 1710 hours, "B" Company of the 2/502 Regiment engaged another Viet Cong battalion west of Carpenter and about 500 meters away as it was going to Carpenter's aid. "A" Company of 1/327 was also engaged by the enemy about 300 meters south of Carpenter's position. The Battalion Commander dropped the idea of linking Carpenter's "C" Company with "A" Company as he did not want Carpenter to abandon his position as long as the Viet Cong could carry off U.S. dead or wounded. Carpenter agreed.

Captain Miller, the 1/327 FAC, ran two strikes, one in support of both "B" Company and "A" Company, before he ran low on fuel and had to relinquish FAC control to Captain Thomas S. Hoff, the Brigade FAC. Hoff ran four more flights, in support of the two units under heavy contact, before darkness set in. During the 9th, 25 immediate and 16 preplanned TAC strikes were flown, 29 in close air support 9/2 and 12 in direct air support.

The last flights were flown just after darkness, when Carpenter's position was again attacked and the F-4C's, with only ten minutes loiter time left, expended on Carpenter's perimeter. Asked by the FAC if he wanted the strikes brought in closer, Carpenter replied, "That did it fine, I believe". At 2135 hours, "A" Company of the

2/502 linked up with Carpenter's "C" Company, which had heavy casualties. The enemy force pulled back from contact with all units. On 9 June, the 1/5 Regiment of the 1st Air Cavalry Division was committed, under operational control of the 101st. An ARVN element air assault, planned for 2200 hours, was called off due to weather.

On the night of 9-10 June 1966, it was impossible to get flareships to expend over the area or to run any night fighter strikes. The weather was low over the valley and, in the darkness, the flareship had to be led in by A-1E radio bearings. The flareship's TACAN at 10,000 feet could not lock-on due to mountains and the aircraft could not get high enough to reach the Pleiku radar. It was extremely difficult for the flareship to pinpoint its drops. Fortunately, the Viet Cong had pulled back that night and no fighter strike was $10/\sqrt{1000}$ necessary.

The three companies in the battle area maintained moderate contact, the following day, with elements of the enemy regiment.

"C" Company and "A" Company of 2/502 defended the vicinity of ZB 128398. "B" Company linked up with the 1/5 Cavalry unit at 2215 and formed a defensive position at ZB 167443. "A" Company of 1/327 was at ZB 125389 in contact all day with an estimated reinforced enemy platoon. "C" Company of 1/327 was moving to assist "A" Company at 0730 hours. A Provisional Company of 77 volunteers, flown in from Phan Rang, moved to assist "A" and "C" Companies of the 2/502 and



remained in the vicinity of ZB 125400.

Communist fire, including at least one .50 caliber, was coming from the ridgelines above the valley where the companies were located, making medical evacuation virtually impossible. Air strikes were flown on the morning of 10 June 1966 in support of the companies trying to link up, but little progress was made during the day.

Weather continued to be poor, with constant rain slowing the ground troops. On the 10th, four preplanned and 35 immediate strikes were flown, all in close air support. Air and artillery kept the enemy at bay.

On 11 June 1966, the U.S. forces reported that the whole valley seemed to have enemy units in it and started moving back to allow air strikes and artillery to break the enemy's "bear hug" tactic which made air strikes difficult. The three companies in the valley moved up the slopes of a mountain plateau, moving through dense jungle with litters of wounded and dead. "A" Company of 1/327, commanded by Captain Ben Willis, withdrawing at daybreak, found itself caught in a valley bowl in a situation similar to the one faced by Carpenter's "C" Company, with enemy fire coming from three sides. Ten strikes were made in support of his unit as it fought its way up the hillside. Air strikes were also flown in support of "A" amd "B" Companies of the 2/502 and the Provisional Company from Phan Rang, which commanded terrain on the high ground above the withdrawing companies. When "A" Company of the 1/327 moved out to support Captain

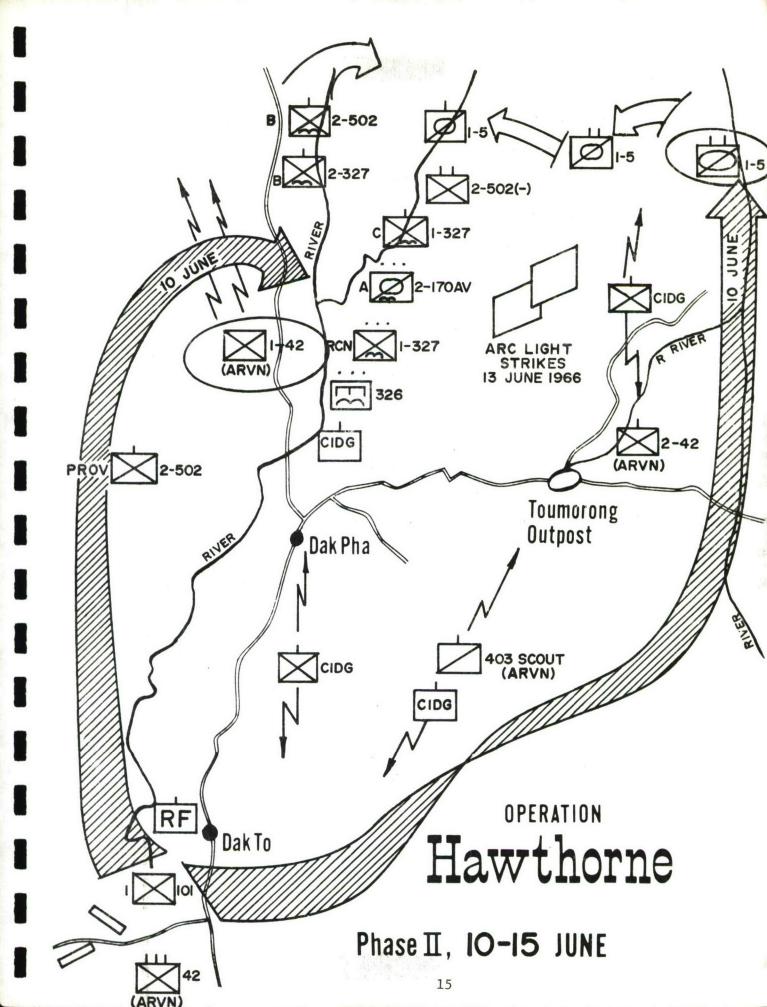
Willis, it ran into a dug-in enemy battalion position as it came over a ridge and was forced to fall back. With most of the U.S. units in contact, the F-4C's were continually overhead, bringing in a total of 69 strike sorties. There was a continuous flow of strike aircraft overhead and the FAC's, Captain Miller and Captain Hoff, were placing them on targets of highest priority. With this heavy air support, plus artillery support, the two companies of the 1/327 were able to break loose from contact and withdrew to the plateau where USMC helicopters lifted the dead and wounded out of the battle area. A USMC helicopter was shot down, on the morning of the 11th, but two Army helicopters got into the valley area for a few moments on the 11th to bring out the more seriously wounded. "A" and "C" Companies of the 2/502 were extracted to Dak To. By early afternoon, the 1st Brigade, 101st Airborne Division, had consolidated its positions and evacuated casualties. TAC air and artillery continued to hammer at the enemy positions in the valley. The 69 strike sorties flown on the 11th expended 64.7 tons of bombs in 66 close air support and three direct air support sorties. Sky Spot missions were flown on the 11th.

On 12 June 1966, the situation had stabilized somewhat, with U.S. forces on the plateau and the enemy in the valley below. There was relatively light contact on the 12th. Only 15 immediate air strikes were flown compared to 59 on the previous day, while 56 preplanned sorties kept the enemy off balance. General William C. Westmoreland visited the battle area on the 12th and was told by Captain Carpenter

that the napalm air strike on and near his position on 9 June had saved his company and burned away communist attackers long enough to give the Americans time to throw up a defense perimeter. Also on the 12th, an NVA rallier reported that the enemy had three battalions pitted against friendly forces in HAWTHORNE, but had $\frac{12}{\text{suffered heavily from air and artillery strikes.}}$

In the breathing spell allowed on the 12th, the stage was being set for one of the most dramatic air strikes of the war - a B-52 strike planned against the enemy concentration which had engaged American forces in the Dak Tan Kan River valley. A B-52 strike planned early in the operation period was conducted on 10 June 1966 using 15 aircraft dropping 270 tons of 500 and 1000 pound bombs on AS 810495 with the objective of preventing an enemy attack against HAWTHORNE forces. It was in an area where seven ARDF fixes had been obtained since 20 April 1966. On 5 June 1966, 30 IR missions were detected in the target box. The situation was made to order for such a strike. Intelligence gathered after the intense fighting of 9-11 June 1966 allowed planners to select the point of impact at ZB 127400, the spot where most of the action took place before the American withdrawal.

The map on page 15 shows the disposition of friendly and enemy forces just prior to the ARC LIGHT strike on 13 June 1966.



For the 13 June strike two target areas were selected with an overlap in the area where the bulk of the enemy was known to be located. Twenty-four B-52's dropped 432 tons of 500 and 1000 pound bombs at 0800 hours with "extraordinary precision", according to the commander of the 2/502 who watched the strike from the hillside. 13/

"...The strike devastated the area. The damage, in places, resembled that which could be expected from a low yield nuclear weapon. The blowdown and cratering effect were enhanced by the use of 1000 pound bombs which seemed to have significantly greater effect than the 750 pound bombs.

This strike is considered the most effective strike ever exploited by this battalion. It is felt that the strike contributed significantly to the annihilation of the better part of an NVA battalion... Of special significance is the fact that the 2d Battalion (Airborne) 502d Infantry suffered no friendly casualties subsequent to, and in the area of the strike, during the period 13-18 June (when the operation was closing up)...."

Unlike previous B-52 strikes, where some four to eighteen hours elapsed before friendly troops entered the impact area, the strike on 13 June 1966 was immediately followed by the heliolift of a company into the target area. No preparation of the LZ, other than helicopter gunships, was conducted. U.S. troops moving into the target area found those NVA soldiers still alive wandering around in a state of shock and offering little, if any, resistance. No friendly casualties were sustained and, as a result, it was decided to lift the reserve company, the Tactical CP, and the mortars into the same LZ. In the six days between 13-18 June 1966, friendly

forces were able to thoroughly and systematically search enemy positions following the B-52 strike. This resulted in a much higher number of captured enemy weapons and equipment than would otherwise have been found. The B-52 strike, in effect, was the turning point of the operation and only light contact was made with the enemy until the operation terminated on 21 June 1966.

U.S. casualties from the operation were 48 kilbed and 239 wounded, the majority of these from the 2/502 and 1/327. Enemy losses were 479 KIA (body count), 506 enemy possibly killed in action, 52 Viet Cong killed by air (body count), 209 Viet Cong KBA (possible) and 22 Viet Cong captured. There were 88 individual and 24 crew-served weapons captured during the operation. Large volumes of documents, medical supplies, communications equipment, and individual load bearing equipment were also captured.

Air support for HAWTHORNE included 277 FAC--controlled tactical air sorties, 160 Sky Spot sorties, and 26 flare and AC-47 sorties. Seventy-one FAC and VR sorties were flown by 0-1E air-craft. The two B-52 missions flown on the 10th and 13th expended 702 tons of GP ordnance, while tactical air strikes dropped 162.5 tons of GP, 176.75 tons of napalm, 35.40 tons of frag bombs, 7.40 tons of CBU, plus rocket and cannon fire. A total of 1073.75 tons of ordnance was expended during HAWTHORNE.

In addition to the 52 enemy killed by air and the estimated 209 others killed by air strikes, air power during HAWTHORNE created four secondary explosions, destroyed 29 structures, four 12.7 machine guns, and three other automatic weapons. Seventeen bunkers and trenches were neutralized or destroyed.

A major problem experienced during the operation was the failure of continuous fire support due to the lack of coordination between FAC's, ground commanders, and artillery forward observers. In some cases, FAC's suspended artillery fire sooner than necessary. There was also poor timing on the part of artillery FO's and FAC's in calling cease fires and completion of air strikes. To correct this, FAC's were briefed to notify artillery FO's when fighters were approaching the target area and to have the artillery fire their last round or volley with WP or smoke. This notified the FAC immediately that artillery had ceased firing and it marked the target for immediate recognition by strike pilots. Better coordination was planned between FAC's, artillery observers, and ground commanders. Experiments were being made with an artillery FO in the FAC aircraft to effect better coordination. This way, the FO could keep the FAC current on all artillery fires and positions. When the FAC concluded an air strike, the FO could resume artillery direction and vice versa.

Another problem was positioning flareships over desired ground units.

The location of HAWTHORNE was such that neither radar nor TACAN was of any use in positioning flareships. During the operation the flareships

had to fly at 10,000 feet, due to weather. When a flare became visible to ground troops, the aircraft had travelled as much as two miles from where the flare dropped. The ALO with the 1st Brigade, 101st, Major Dale A. Williams, recommended that all flareships and AC-47's be equipped with FM homers which would allow them to position themselves over a ground unit.

An interesting experience occurred during a strike on a deeply entrenched hostile force equipped with numerous AA weapons. In this strike, an A-1E inadvertently dropped his full center-line fuel tank in the target area. The following aircraft ignited the gasoline soaked area with a bomb drop nearby. A very intense fire immediately engulfed an area about 100 feet in diameter. The FAC stated that the fuel tank (with resultant fire) was the most effective single piece of ordnance delivered during the entire 23-sortie, three-hour strike. The 1st Brigade ALO recommended that this tactic be employed in future operations, possibly using gasoline filled 19/ napalm cans, followed by strafing with high explosives.

The use of Sky Spot radar strikes during Operation HAWTHORNE was considered significant by the Brigade ALO. It allowed strikes during adverse weather and at night which had a definite psychological impact on hostile forces, who could no longer feel secure from air $\frac{20}{}$ strikes during monsoon weather.



Psychological operations in support of HAWTHORNE were not entirely effective according to the Commander of the 1st Brigade, 101st Airborne Division, although the HAWTHORNE operation was considered suitable for psyops. Enemy forces infiltrating to the Kontum area had just completed the arduous trek along the Ho Chi Minh Trail and were tired, afraid and still unsure of the terrain. At this point they were susceptible to psyops. However, although more than six and a half million leaflets were dropped and 36 loudspeaker hours flown during HAWTHORNE, the program effectiveness was degraded by problems associated with equipment and with the control system. Aircraft were delayed because of maintenance difficulties. Appropriate equipment such as loudspeakers were in short supply. Limitation on minimum altitudes affected the operation.

The Commander of the 14th Air Commando Wing, who was responsible for providing the aircraft support for the psyops program said that aircraft and equipment were more than adequate to perform the mission above 1500 feet. He noted that aircraft battle damage from November 65 through May 66 had occurred on 51 occasions and two crew members were severely wounded. He further stated that the wing had a policy not to station aircraft overnight at forward operating bases because (1) most bases were not secure during dark hours, (2) flying safety was imperiled due to the light U-10's being affected by turboprop propellor blast and helicopter downwash, (3) host bases could not provide adequate sleeping, transportation and messing facilities,



(4) aircraft maintenance and supply support was minimal, and (5) experience had taught that greater mission flexibility and aircraft $\frac{22}{}$ utilization was possible with aircraft under central control.

In his after-action report, the ALO with the 1st Brigade, 101st, said that air support throughout Operation HAWTHORNE was excellent in all aspects. All ground commanders expressed their appreciation and gratitude for the outstanding support they received. Operation HAWTHORNE, particularly, showed how air strikes could be made available in adequate numbers during periods of emergency, when they were really needed, and that continuous air CAP during an extended operation was not really necessary. Perhaps the most significant lesson learned during HAWTHORNE was the exceptional effectiveness of a B-52 mission, when directed at the proper time and immediately exploited.

Appendix A depicts the air support provided for Operation HAWTHORNE in statistical form as provided by the Tactical Air Control Center (TACC).

AIR SUPPORT PROVIDED FOR OPERATION HAWTHORNE

												AF	PE	INI	I	A	_				v	
52 S/TONS									270			432										702
B-52 SORTIES/TONS									15			24										39
FUNCTION		7		7	2		14	12		9	23	30	16	17		5						139
MISSION	10		9		2	15	21	29	39	99	48	10	16	9	9	19	2	2	10	10		317
TONS	7.0	5.5	5.4	1.3	2.7	11.1	24.9	33.9	28.9	64.7	53.7	36.7	27.5	18.1	8.6	2.0		1.0	5.3			338.3
FLOWN IMMEDIATE	10		9	5	2	12	20	25	35	59	15	10	20	9	9	15			4			250
SORTIES FLOWN PRE-PLANNED IMM		7		2	2		14	16	4	10	99	30	12	17		7		2	9	10		195
QUESTED IMMEDIATE	2		3	2	2	10	10	12	16	32	80	5	10	3	4	80	2		2	10		141
SORTIES REQUESTED PRE-PLANNED IMMED		2		1	1		8	5	2	4	30	18	4	7	1	5		1	3	9		98
DATE	2 Jun	3 Jun	4 Jun	5 Jun	e Jun	7 Jun		o Jun	10 Jun							17 Jun			20 Jun	21 Jun		TOTAL

SOURCE: TACTICAL AIR CONTROL CENTER COMBAT REPORT STATISTICS.



OPERATION HAWTHORNE

Footnotes

(References as noted provided in one copy to AFCHO and in DOPEC file copy.)

- $\underline{1}$ / (C) Hq 1st Brigade, 101st Airborne Div. Informal After-Action Critique, 30 June 66 ($\underline{Doc 1}$).
- 2/ (U) After-Action Report, Operation HAWTHORNE prepared by ALO, 1st Brigade, 101st Airborne Div. undated (Doc 2).
- 3/ (C) 1st Bde, 101st Airborne Div. After-Action Critique, 30 June 66 (Doc 3).
- 4/ (S) Interview with Captain Burton T. Miller, Jr., FAC, 1/327 Reg., 20 July 66.
- 5/ (C) COMUSMACV SITREP 158-66, 8 June 66, (Doc 4).
- 6/ Interview with Captain Miller, 20 July 66.
- 7/ (C) COMUSMACV SITREP 160-66, 100920Z June 66 (Doc 4).
- 8/ (S) Interview with Captain Miller, 20 July 66.
- 9/ (S) TACC Combat Reports Statistics, collected on 15 July 66 (Doc 16).
- 10/ (S) Interview with Captain Miller, 20 July 66.
- 11/ (C) COMUSMACV SITREP 162-66, 9-10 June 66 (Doc 4).
- 12/ (S) 7AF D/I "Box Kcore", Nr. 119, 13 June 66.
- 13/ (C) 1st Brigade, 101st Airborne Div. Informal After-Action Critique, 30 June 66 (Doc 1).
- 14/ Ibid.
- 15/ (C) COMUSMACV SITREP 171-66, 19-20 June 66 (Doc 4).
- 16/ (C) After-Action Report, Operation HAWTHORNE prepared by ALO, 1st Brigade, 101st Airborne Div. undated ($\underline{Doc 2}$).
- 17/ Ibid.

- <u>18</u>/ Ibid.
- 19/ Ibid.
- <u>20</u>/ Ibid.
- $\underline{21}/$ (C) Hq 1st Brigade, 101st Airborne Div. Informal After-Action Critique, 30 June 66 ($\underline{Doc\ 1}$).
- 22/ (S) Msg, 14ACW to 7AF, DCC 21501, 010100Z July 66 (Doc 5).